

## **AMEC 1.4: Advanced Interim Solid Radioactive Waste Storage Technologies**

### Description:

Russian storage facilities were poorly designed and constructed. Decay and damage at these facilities has resulted in localized contamination. This project will improve Russian Navy capabilities in solid radioactive waste storage and thus minimize the spread of radiological contamination. The ultimate vision for this project is a self-sustaining storage system, in which the Russian Navy stores its solid radioactive waste safely and securely without participation from U.S. or Norwegian officials.

### Status/Accomplishments:

The Russian Navy has completed a new storage facility at Andreeva Bay. U.S. developed coating which aids in easy decontamination has been applied at RTP ATOMFLOT storage facilities in Murmansk and a one year field test of the coating has started in August. Low-temperature cyclic testing of the coating has been completed at the National Institutes of Standards and Technology. Twenty-two containers for storage and transport of solid radioactive waste have been fabricated by a U.S. company and shipped to Murmansk. Half of these containers will be evaluated by Nuclide for Russian regulatory certification and the other half will go directly to the Russian Navy's new storage facility at Andreeva Bay for proof of process demonstration with Russian Navy solid radioactive waste. Perhaps most important, the Russian side is designing a new container made of reinforced concrete and the U.S. side is supporting this effort financially and with direct technical input into the design. The Russian Navy and MINATOM plan to mass-produce this container after the design is completed and approved. This effort will result in a self-sustaining infrastructure with clear practical applications.

### Relationship to CTR:

CTR's submarine dismantlement efforts generate large amounts of solid radioactive waste, which must be stored safely and securely. AMEC project 1.4 is improving the Russian Federation's storage capabilities for the waste from all dismantled submarines, including those being dismantled under CTR. In particular, the concrete containers being designed by the Russian side with U.S. assistance could be used at all of the Russian shipyards, naval bases, and, ultimately, MINATOM sites.

### International Agreement:

This project is being undertaken pursuant to the CTR SOAE agreement.

### National Security Issues:

Safe, secure storage of radioactive waste in Northwest Russia is necessary to prevent a backlog in the submarine dismantlement process. It is also a high priority with our NATO ally, Norway. AMEC Project 1.4 will help stabilize the entire Kola Peninsula by reducing public concerns about improper storage of radioactive wastes resulting from nuclear submarine dismantlement. In particular, this technology will be used in the Andreeva Bay region where deteriorating storage facilities are resulting in local contamination of the environment. All technology proposed for the project is commercially available and without restriction.

### Timeline:

December 19, 1996 to July 1, 2002

Total months: 66

### Funding Matrix:

	FY 97	FY98	FY 99	FY 00	FY 01	FY 02	Total
US Project Requirements (\$ in thousands)	250	1,250	850	1,600	900	600	\$5,450